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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,118	05/31/2006	Masato Ishio	515.040US01	2312
34206	7590	12/27/2010		
FOGG & POWERS LLC 5810 W 78TH STREET SUITE 100 MINNEAPOLIS, MN 55439			EXAMINER PARK, HYUN D	
			ART UNIT 2857	PAPER NUMBER
			NOTIFICATION DATE 12/27/2010	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/596,118	<b>Applicant(s)</b> ISHIO ET AL.	
	<b>Examiner</b> HYUN PARK	<b>Art Unit</b> 2857	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Drafts, Person's Patent Drawing, Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)  | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/07/2010, 11/17/2010</u>                                     | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 10 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Noburu, JP Patent Publication H04-16782 (English translated version) (cited by the Applicant) (hereinafter Noburu)

**Regarding Claims 10 and 20:** Kobayashi discloses a test apparatus and method for a control unit, comprising:

testing means for testing the operation of said control unit based on a relationship between a pattern signal input to said control unit and an output signal output in response to said pattern signal from a target being controlled by said control unit (3.

*Detailed Explanation of Invention; Means of Solving Problems; 5<sup>th</sup> and 6<sup>th</sup> paragraphs);*

means for causing said testing means during execution of a first pattern signal to switch to the execution a second pattern signal when a first pattern signal transition condition for making a transition to the execution of said second pattern signal holds as a result of the execution of the first pattern signal (*Fig. 3; 1<sup>st</sup> test pattern is the test patterns in step*

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*1. With the detection of error in step 2 and 3, the 1<sup>st</sup> test pattern switches to the 2<sup>nd</sup> test pattern, which is shorter than one inputted the previous time, in step 4)*

means for causing said testing means during execution of said first pattern signal to switch to the execution of a third pattern signal when a second pattern signal transition condition for making a transition to the execution of said third pattern signal holds as a result of the execution of the first pattern signal, wherein the testing means continues testing the operation of the control unit based on one of the second pattern signal or the third pattern signal (*Fig. 3; inputting of the 2<sup>nd</sup> test patterns in step 4, still results in error in step 6, wherein the 3<sup>rd</sup> test pattern, that is shorter than the 2<sup>nd</sup> test pattern is now used. Thus, the initial 1<sup>st</sup> test pattern has now been switched to 3<sup>rd</sup> test patterns*)

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoenninger, US Pat No. 5,490,065 (hereinafter Hoenninger) in view of Chapman et al., US Pat No. 5,442,738 (hereinafter Chapman).

**Regarding Claims 10 and 20:** Hoenninger discloses a test apparatus (**7**; *Fig. 1*) and method for a control unit (**10**; *Fig. 1*), comprising:

testing means for testing the operation of said control unit based on a relationship between a pattern signal input (**90**; *Fig. 5*) to said control unit and an output signal (**91**; *Fig. 5*) output in response to said pattern signal (*Fig. 5; Col. 7, lines 32-37*) from a target being controlled by said control unit;

means for causing said testing means during execution of a first pattern signal to switch to the execution a second pattern signal when a first pattern signal transition condition for making a transition to the execution of said second pattern signal holds as a result of the execution of the first pattern signal (*Note: Hoenninger discloses conditions for transitioning to different pattern signals, namely first from initializing signals (Col. 3, lines 40-60) to a set of input signals generated by the signal generators (Col. 3, line 67, Col.*

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*4, lines 1-15) provided that a successful communication between the control unit and testing computer is made in the initialization step. Afterwards, transition from signal generated input signals to square wave signals (Col. 4, lines 28-35) is made provided the test program recognizes a falling edge signal on the ignition signal output line 17 (Col. 4, lines 21-28).*

Hoenninger does not disclose means for causing said testing means during execution of said first pattern signal to switch to the execution of a third pattern signal when a second pattern signal transition condition for making a transition to the execution of said third pattern signal holds as a result of the execution of the first pattern signal, wherein the testing means continues testing the operation of the control unit based on one of the second pattern signal or the third pattern signal.

Chapman discloses a computer display with various nested windows configurations (*Figs. 3-6*), which allows the structural relationships between the objects (*Abstract, lines 2-5*) to be represented in a way that is visually easy to comprehend (*Col. 4, lines 28-30*). Furthermore, the display is also user friendly and easy to edit and read (*Col. 4, lines 40-41*).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the teachings of Chapman in the apparatus and method of Hoenninger to organize the pattern signal testing structures that is user-friendly, visually

easy to comprehend, edit and read as taught by Chapman, wherein the said organization would consist of having means for causing said testing means during execution of said first pattern signal to switch to the execution of a third pattern signal when a second pattern signal transition condition for making a transition to the execution of said third pattern signal holds as a result of the execution of the first pattern signal, wherein the testing means continues testing the operation of the control unit based on one of the second pattern signal or the third pattern signal. (Note: to illustrate the said organization, following examples are given below.)

**Example 1:** Hoenninger discloses that once the system is test ready after the first (initial) test pattern signal (described in Col. 3, lines 40-60), second test pattern signals are applied (as described in Col. 3, line 67 to Col. 4, lines 1-15). This second test pattern signal (or set of input signals) however, can be applied in various manners, such as time-independent, time dependent, and etc. By using one of the Chapman's teachings, namely Fig. 4 (where the entity A is embedded with sub-entities B and C), Hoenninger can then better organize and ***simultaneously*** display the pattern signals testing structure as follows: **(Entity A)**: First test-readying pattern signal, **(Sub-entity B)**: time-independent signal (second test pattern signal), and **(Sub-entity C)**: time-dependent signal (third test pattern signal). As such, first test pattern signal can transition to either second or third pattern signals provided respective transitioning conditions are satisfied, and once the second or third signal is selected, the testing

continues based on the selected signal, either second or third, since the system has already been initialized with the first test pattern).

**Example 2:** Hoenninger also discloses applying various wave signals, such as square, sawtooth, or triangular, once the test program recognizes a falling edge signal as described in Col. 4, lines 16-35. By using one of the Chapman's teachings, namely Fig. 4 (where the entity A is embedded with sub-entities B and C), Hoenninger can then better organize and ***simultaneously*** display the pattern signals testing structure as follows: (for the sake of the argument, suppose the first test pattern signal is the input signals generated by the signal generator). **(Entity A):** First input pattern signal, **(Sub-entity B):** square wave signal (second test pattern signal), and **(Sub-entity C):** sawtooth wave signal (third test pattern signal). As such, first test pattern signal can transition to either second or third pattern signals provided respective transitioning conditions are satisfied, and once the second or third signal is selected, the testing continues based on the selected signal, either second or third signal, since the test program has already recognized a falling edge signals).

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 10 and 20 have been considered but are moot in view of the new ground(s) of rejection.

NOTE: Applicant argues that Hoenninger does not disclose "causing said testing means to switch "to the execution of a second pattern signal" **during execution of a**

**first pattern signal**, since the “test step 32..and the subsequent program step 33” are completed prior to execution of “program steps, 35 and 36”

In Response, the Examiner disagrees. The word “**during**” as claimed denotes the **switching execution of a first pattern signal to the execution of a second (third) pattern signal**, and not exclusively the **execution of a first pattern signal** as the Applicant now appears to assert. The usage of the word “**during**” with “**to**” (which couples first and second test pattern executions) are describing the transitioning or switching and not execution of a first test pattern signal alone. Thus, using the above Example 1 as an example, the phrase as claimed “during switching from execution from a first pattern signal to the execution of a second pattern signal” would be met by Hoenninger, which discloses switching transition from a system that is test ready after the first (initial) test pattern signal (described in Col. 3, lines 40-60) to the application of a second test pattern signals (as described in Col. 3, line 67 to Col. 4, lines 1-15).

7. Applicant, as had argued previously, argues that Chapman provides no teaching about determining when to switch from one test signal pattern to another test signal pattern. As such, one of ordinary skill in the art would not be able to modify Hoenninger as suggest by the Examiner to produce the claimed invention.

In Response, the Examiner respectively disagrees for the following reason. Hoenninger already teaches option, the option to switch from one well known wave signal to another as desired (used as an example for this argument—see Example 2 above, but Example 1 is equally applicable), namely from square wave to sawtooth and

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triangular shaped signals (Col. 4, lines 28-36) once the falling edge signal is recognized (Col. 4, lines 16-27; Fig. 2, Step 34). Since Chapman provides a visual, user-friendly data representation where all the available options can now be displayed all at once, one of ordinary skill in the art would have been able to easily choose a given wave signal (and any combination) as desired, and it certainly would have been obvious to try other well known wave signals. As such, one of ordinary skill in the art would have been able to modify Hoenninger as suggest by the Examiner to produce the claimed invention.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HYUN PARK whose telephone number is (571)270-7922. The examiner can normally be reached on 8-4 PM, M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571)272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. P./

12/17/2010

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